AUTHOR INDEX TO VOLUME 26

References with (A) are merely to abstracts of papers presented at meetings of the Physical Society.

Albers, V. M. Photo-electric valve coated with potassium—**26,** 671

Allison, Samuel K., and **Alice H. Armstrong.** Molybdenum K series lines—**26,** 701

———Relative intensities of some tungsten L series and Cu K series lines—**26,** 714

Allison, Samuel K., and **William Duane.** Wavelengths of scattered x-rays—**26,** 300

Armstrong, Alice H. (see Allison, Samuel K.)

Anderson, S. H. An acoustic oscillograph—**26,** 287(A)

———An anomalous sound absorption coefficient —**26,** 288(A)

Anderson, S. H. and **G. G. Kretchmar.** Tungsten arc characteristics—**26,** 33

Angell, M. F. Thermal conductivity of some metals at high temperatures—**26,** 287(A)

Banerji, Durgadas. Scattering of light in mixtures of air and CO_2—**26,** 495

Barker, E. F. and **O. S. Duffendack.** Ionization of HCl by electrons—**26,** 339

Bartlett, Russell S. Photo-resistance effect for metals at low temperatures—**26,** 247

Barton, Henry A. Negative ion emission from oxide coated filaments—**26,** 360

Birge, Raymond T. Band spectra associated with carbon—**26,** 283(A)

———(see Hopfield, J. J.)—**26,** 283(A)

Blake, F. C. Precision x-ray measurements—**26,** 60

Boucher, Paul E. Mobility of negative ions in flames—**26,** 807

Bowen, I. S. and **R. A. Millikan.** Pp′ groups in atoms of the same electronic structure—**26,** 150

———Series spectra of B_{II} and C_{III}—**26,** 282(A), 310

Bozorth, Richard M. Orientations of crystals in electrodeposited metals—**26,** 390

Bramley, Arthur. Striated discharge in hydrogen—**26,** 794

Brewer, A. Keith. Ionization in reacting gases—**26,** 633

Buckley, O. E. and **L. W. McKeehan.** Magnetic properties of permalloy—**26,** 261

Caswell, A. E. Thermo-electric properties of pure metals and alloys—**26,** 286(A)

Chamberlain, Katherine. Fine structure of x-ray absorption edges—**26,** 525

Chenault, R. L. (see Foote, Paul D.)—**26,** 165

Collins, J. R. Infrared absorption spectrum of water—**26,** 771

Compton, Arthur H. and **Alfred W. Simon.** Directed quanta of scattered x-rays—**26,** 289

Compton, K. T. and **C. C. Van Voorhis.** Ionization of gas molecules by electron impacts—**26,** 436

Dahm, Thos. M. Organic absorption media as color screens in the ultraviolet—**26,** 285(A)

Davey, Wheeler P. Lattice parameter and density of pure tungsten—**26,** 736

Davis, Bergen. Relation between critical potentials and indices of refraction—**26,** 232

DeFoe, O. K. (see Jauncey, G. E. M.)

Derieux, J. B. Reply to criticism by Sexl—**26,** 97

De Vinney, S. S. (see Ingersoll, L. R.)—**26,** 86

Dixon, Alfred L. (see Rodebush, Worth H.)—**26,** 851

Duane, William (see Allison, Samuel K.)—**26,** 300

Duffendack, O. S. (see Barker, E. F.)—**26,** 339

Eckart, Carl. Post-arc conductivity and metastable helium—**26,** 454

Ellis, Joseph W. Emission from the Bunsen Flame —**26,** 283(A)

———Infrared bands of CO_2—**26,** 469

Erikson, Henry A. Mobility of argon and hydrogen ions in air—**26,** 465

———Mobility of the ions of the active deposits of Th and Ra—**26,** 629

———Ions from hot platinum—**26,** 625

Ewing, Scott. Light scattering coefficient of some saturated vapors—**26,** 285(A)

Foote, Paul D. and **F. L. Mohler.** Photo-electric ionization of Cs vapor—**26,** 195

Foote, Paul D., T. Takamine and **R. L. Chenault.** Excitation of forbidden spectral lines—**26,** 165

Fricke, Hugo. Electric conductivity and capacity of disperse systems. II—**26,** 678

———Electric capacity of suspensions of red corpuscles of a dog—**26,** 682

Graber, M. E. Optical constants of magnesium and zinc crystals—**26,** 380
Ghosh, R. N. Duration of fluorescence of mercury vapor—**26,** 376

Hall, Edwin H. Measurement of the four magnetic transverse effects—**26,** 820
Hamer, Richard. Reflecting powers of elements in the ultraviolet—**26,** 285(A)
———"Raies ultimes" and photo-electric thresholds —**26,** 286(A)
Harrison, George R. and **J. C. Slater.** Line breadths and absorption probabilities in Na vapor—**26,** 176
Hartig, Henry E. Apparent transmission of low velocity electrons through Al foil—**26,** 221
Hayner, Lucy J. Persistence of the radiation excited in Hg vapor—**26,** 364
Hildebrand, J. H. Energy of combination of gaseous ions—**26,** 284(A)
Hogness, T. R. and **E. G. Lunn.** Ionization of hydrogen by electron impact—**26,** 44
———Ionization of nitrogen by electron impact— **26,** 284(A), 786
Hopfield, J. J. Series and multiplets in sulfur and chlorine—**26,** 282(A)
Hopfield, J. J. and **R. T. Birge.** Quantum analysis of new nitrogen bands in the ultraviolet—**26,** 283(A)
Hoyt, Frank C. Theory of relative intensities in series spectra—**26,** 749

Ingersoll, L. R. and **S. S. De Vinney.** Non-magnetic films of nickel—**26,** 86

Jauncey, G. E. M. and **O. K. DeFoe.** Number of beta-rays associated with scattered x-rays—**26,** 281(A), 433
Jensen, Axel G. Measuring microvoltages at radio frequencies—**26,** 118
Jesse, William P. Ionization in different gases by slow-moving electrons—**26,** 208
Johnson, J. B. Schottky effect in low frequency circuits—**26,** 71

Kazda, C. B. Photo-electric threshold for mercury— **26,** 643
Kimball, A. L., Jr. and **D. E. Lovell.** Variation of Young's modulus with temperature—**26,** 121
Klein, A. L. Secondary emission from a Ni surface due to slow positive ion bombardment—**26,** 800
Knudsen, Vern O. Speech reception; interfering effect of tones and noise—**26,** 133
———Effect of reverberation upon the quality of speech—**26,** 287(A)
Kretchmar, G. G. (see Anderson, S. H.)—**26,** 33
Kwei, C. T. Low-voltage arcs in hydrogen, nitrogen, and in certain mixtures—**26,** 537

Langmuir, Irving. Scattering of electrons in ionized gases—**26,** 585
Lane, C. E. Binaural beats—**26,** 401
Linder, Ernest G. Thermo-electric effect in single crystal zinc wires—**26,** 486
Loria, S. Indirectly excited fluorescence spectra— **26,** 573
Loughridge, D. H. Direction of ejection of photo-electrons produced by x-rays—**26,** 697
Lovell, D. E. (see Kimball, A. L., Jr.)—**26,** 121
Lunn, E. G. (see Hogness, T. R.)

Magarian, M. C. Tungsten K series rays scattered by graphite—**26,** 282(A)
Martin, R. E. Effect of light on thermal conductivity of Se—**26,** 475
McAlister, E. D. Parasitic thermo-electric forces in homogeneous metals—**26,** 286(A)
McKeehan, L. W. Theory of ferromagnetism—**26,** 274
———(see Buckley, O. E.)—**26,** 261
Millikan, R. A. Divisibility of the electron; nature of the evidence—**26,** 99
———(see Bowen, I. S.)
Mohler, F. L. Production of ions by electron collisions—**26,** 614
———(see Foote, Paul D.)—**26,** 195
Monk, George S. Secondary standards of wavelength in the spectra of Ne and Fe—**26,** 284(A)
Mulliken, Robert S. Isotope effect in band spectra III. Copper iodide—**26,** 1
———Spectrum of silicon nitride—**26,** 319
———One-valence-electron emitters of band spectra —**26,** 561

Neuman, L. J. Thermo-electric effects due to mechanical treatment—**26,** 286(A)

O'Day, Marcus. Extension of bar method of measuring specific heat—**26,** 287(A)

Patterson, R. A. Crystal structure of Ti and Cr— **26,** 56
Petry, Robert L. Secondary electron emission from Fe, Ni and Mo—**26,** 346
Poindexter, Franklin E. Mercury vapor pressure at low temperatures—**26,** 859
Power, A. D. Fluorescence of cadmium vapor—**26,** 761

Rashevsky, N. P. Kinetic theory of thermionic effect—**26,** 241

Richtmyer, F. K. Apparent shape of x-ray lines and absorption limits—**26,** 724

Rodebush, Worth H. and **Alfred L. Dixon.** Vapor pressure of metals: a new experimental method —**26,** 851

Ross, P. A. X-rays scattered by Mo—**26,** 281(A)

———Ratio of intensity of the Compton lines—**26** 282(A)

Schumann, T. E. W. Electrification of rain drops; Elster and Geitel's theory—**26,** 105

Sexl, Th. Electric charges on individual microscopic particles—**26,** 92

Sharp, H. M. Change of wave-length of scattered x-rays—**26,** 691

Simon, Alfred W. Electrostatic systems; quantitative theory—**26,** 111

———(see Compton, Arthur H.)—**26,** 289

Slater, J. C. Physically degenerate systems and quantum dynamics—**26,** 419

———(see Harrison, George R.)—**26,** 176

Steinberg, J. C. Relation between the loudness of a sound and its physical stimulus—**26,** 507

Stewart, G. W. Influence of a branch line upon acoustic transmission—**26,** 688

Stewart, John Q. Treatment of radiation-pressure and gas-pressure as due to inter-molecular forces —**26,** 491

Stranathan, J. D. Simultaneous high frequency and direct current resistances of fine wires—**26,** 500

Takamine, T. (see Foote, Paul D.)—**26,** 165

Taylor, Geo. F. Small resistance thermometer— **26,** 841

Thomas, Charges H. Soft x-rays from Fe, Co, Ni and Cu—**26,** 739

Tolman, Richard C. Maximum coefficients of absorption—**26,** 431

Tschudi, E. W. Impact of copper bars—**26,** 125

Turner, Louis A. Multiple x-ray ionization of light atoms—**26,** 143

Van Voorhis, C. C. (see Compton, K. T.)—**26,** 436

Witmer, Enos E. Critical potential of the negative band spectrum of nitrogen—**26,** 780

Wolf, Alfred. Theory of electrical conduction in metals—**26,** 256

Woodruff, Albert E. Photo-electric emission from Pt.—**26,** 655

Zumstein, R. V. Absorption spectrum of Pb vapor in the ultraviolet—**26,** 189

———The absorption spectrum of Mn vapor—**26,** 765

ANALYTIC SUBJECT INDEX TO VOLUME 26

References with (A) are merely to abstracts of papers presented at meetings of the Physical Society.

Absorption of light (see also Spectrum)
screens for ultraviolet; organic media—**26,** 285 (A13)
theory, quantum—**26,** 431
Acoustic oscillograph
design—**26,** 287(A22)
Acoustics
absorption, anomalous, in auditorium—**26,** 288 (A24)
auditoriums; speech reception
effect of reverberation—**26,** 287(A23)
effect of tones and noise—**26,** 133
Arc, electric (see Spectra)
tungsten; characteristics—**26,** 33
Arc, low-voltage
electron velocity distribution—**26,** 585
helium in Hg; conductivity just after arc ceases—**26,** 454
hydrogen, N_3 and mixtures with Hg; characteristics—**26,** 537
Atomic structure and dynamics (see Quantum theory)
helium; life of metastable states $2S$ and $2s$—**26,** 454
Audition
binaural beats; objective and subjective—**26,** 401
loudness; relation to physical stimulus—**26,** 507
speech reception (see Acoustics)

Book reviews
Anderson, William Ballantyne; Physics for Technical Students—**26,** 416
———Mechanics and Heat—**26,** 871
Back, E. and A. Landé; Zeemaneffekt und Multiplettstruktur der Spektrallinien—**26,** 139
Berliner, Arnold, and K. Scheel; Physikalisches Handworterbuch—**26,** 415
Berthoud, Alfred; New Theories of Matter and the Atom—**26,** 413
Bond, W. N.; Introduction to Fluid Motion—**26,** 870
"Chemical Age" Chemical Dictionary—**26,** 142
Colebrook, F. M.; Alternating Currents and Transients—**26,** 524
Cranston, J. A.; Structure of Matter—**26,** 280
De Donder, Th.; Théorie Mathématique de l'Electricité—**26,** 140
Dingler, Hugo; Grundlage der Macschen Philosophie—**26,** 414
Drucker, C.; Ostwald-Luther, Messungen—**26,** 869
Duff, A. Wilmer; College Physics—**26,** 416
Gehloff, Georg (editor); Lehrbuch der Technischen Physik. Masse und Messen, Mechanik, Akustik, und Thermodynamik—**26,** 141
Georgii, Walter; Meteorologischen Messmethoden—**26,** 139
Ingersoll, L. R.; Laboratory manual of Experiments in Physics—**26,** 142
Johnson, K. S.; Transmission circuits for telephonic communication—**26,** 141
Lecher, E.; Kultur der Gegenwart; Physik—**26,** 280
Lertes, P.; Radio-amateur—**26,** 141
Lewis, W. C. M.; System of Physical Chemistry, Vol. II. Thermodynamics—**26,** 869
Luckiesh, M.; Foundations of the Universe—**26,** 413
Mariotte, Edme; Discours de la Nature de l'Air etc.—**26,** 142
Marx Handbuch der Radiologie, Vol. 6; Die Theorien der Radiologie—**26,** 414
Payne, Cecilia H.; Stellar Atmospheres—**26,** 870
Picard, Emile; Mélanges de Mathematiques et de Physiques—**26,** 417
Pidduck, F. B.; A Treatise on Electricity (second edition)—**26,** 871
Reese, H. M.; Light (second edition)—**26,** 524
Sachs, George; Grundbegriffe der Mechanischen Technologie der Metalle—**26,** 415
Schackel, R. G.; Modern School Electricity and Magnetism—**26,** 871

Capacity (see Electrical capacity)
Compton effect (see x-rays, scattering)
Crystal structure and density
films, sputtered; Ni—**26,** 86
metals
chromium and Ti—**26,** 56
electrodeposited; Cd, Co, Cu, Fe, Ni, Zn; orientations—**26,** 390
iron, pure—**26,** 60
sputtered Ni—**26,** 86
tungsten, pure—**26,** 736

Density (see Crystal structure)
Discharge through gases (see Arc)
hydrogen; striated; potential distribution, electron concentration and mean electron energy—**26,** 794

Elastic properties
Young's modulus; steel; variation with temperature—**26,** 121
Electrical capacity
suspensions of spheroids; theory—**26,** 678
red blood corpuscles of dog—**26,** 682
Electrical conductivity and resistance
films, sputtered
Ni; resistance—**26,** 86
photo-resistance effect—**26,** 247
temperature coefficient—**26,** 247
frequency effect; simultaneous high and low frequency measurements—**26,** 500
measurement; bar method; electrical and thermal conductivities, specific heat and Thomson effect for same specimen—**26,** 287(A21)
photo-resistance effect; sputtered films of Bi, Pd, Cu, Pt, Au, Ag, Te—**26,** 247
temperature coefficient for films—**26,** 247
theory, for metals—**26,** 256
Electrical measurements
voltages, micro-, at radio frequencies—**26,** 118
Electrification
drops; by collision with small drops—**26,** 105
rain; Elster and Geitel's theory—**26,** 105
Electromagnetic transverse effects
Ettingshausen effect
measurement—**26,** 820
for Au, Co, Ni, Pd—**26,** 820
films, sputtered Ni; Hall effect—**26,** 86
Hall effect
measurement—**26,** 820
for Au, Co, Ni, Pd—**26,** 820
for Ni films—**26,** 86
Electrons
charge
criticism of oil-drop experiments—**26,** 92
reply—**26,** 97
divisibility; discussion of evidence—**26,** 92, 99
mass; from x-ray Compton effect—**26,** 691
scattering, in ionized gases—**26,** 585
secondary
from Fe, Ni, Mo; 0-1500 v.—**26,** 346
from Ni; positive bombardment—**26,** 800
transmission through Al foil—**26,** 221
velocity distribution, in low-voltage arc—**26,** 585

Electrostatic machine
theory, general; cyclic—**26,** 111
Ettingshausen effect (see Electromagnetic transverse)

Filament
tungsten; effect of HCl on resistance—**26,** 339
Films (see Crystal structure, Electrical conductivity, Electromagnetic tranverse, Magnetic)
color of sputtered Ni—**25,** 86
Flames (see Ions, Spectra)
Fluorescence and phosphorescence
mercury vapor
discussion of experiments—**26,** 376
persistance—**26,** 264

Gases
pressure; theory based on repulsive inter-molecular forces—**26,** 491

Hall effect (see Electromagnetic transverse)

Impact
duration; copper and steel bars—**26,** 125
Ionization (see Potentials, critical)
by chemical reaction; oxidation of ethyl alcohol in contact with electrodes—**26,** 633
by electron impact
in A, CO, CH_4, He, H_2, N_2—**26,** 208
in A, He, H_2, Hg, HCl, N_2—**26,** 436
in helium with H_2; ions formed—**26,** 44
in hydrogen; ions formed—**26,** 44
in HCl—**26,** 339
in HCl, HgCl, Hg, I; ions formed—**26,** 614
in nitrogen; ions formed—**26,** 284(A11), 786
photo-electric, of gases—**26,** 195
Ions (see Electrons, Ionization, Positive rays)
combination of halide ions with alkali metals; energy calculated—**26,** 284(A12)
in flames; gasoline, hydrogen, HCl; mobility—**26,** 807
mobility
active deposits of Th and Ra—**26,** 629
argon and hydrogen ions in air—**26,** 465
ions in flames, negative—**26,** 807
ions from hot Pt—**26,** 625

Leduc effect (see Thermo-magnetic transverse)

Magnetic properties
films, sputtered Ni—**26,** 86
permalloy—**26,** 261
wire; demagnetising factor—**26,** 261
theory of ferromagnetism; relation to atomic magnetostriction—**26,** 274

Magnetostriction effect
permalloy—**26,** 261
relation to ferromagnetism; theory—**26,** 261
Molecular aggregation
in Na vapor at high temperatures—**26,** 176

Nernst effect (see Thermo-magnetic transverse)

Optical constants (see Absorption, Reflection, Refraction, Scattering)
magnesium and zinc crystals—**26,** 380

Phosphorescence (see Fluorescence)
Photo-electric effect (see also x-rays)
caesium vapor—**26,** 195
gases; measurement of ionization—**26,** 195
measurements; null method, eliminating fluctuations of arc—**26,** 655
mercury, flowing; threshold—**26,** 643
platinum; effect of heat treatment—**26,** 655
threshold and work function
mercury, flowing—**26,** 643
platinum—**26,** 655
relation to optical reflection—**26,** 285(A15)
relation to "raies ultimes"—**26,** 286(A16)
Photo-electric valve
dumb-bell, coated with K—**26,** 671
Photo-resistance effect (see Electrical conductivity)
Photometer
photo-ionization—**26,** 195
Positive rays
electron emission, from Ni surface—**26,** 800
reflection from Ni surface—**26,** 800
Potentials, critical
aluminum; from photo-electric effect, of electron impact—**26,** 221
calculated from dispersion formula—**26,** 232
cobalt, Cu, Fe, Ni; from photo-electric effect of electron impact—**26,** 739
determination from photo-electric effect of electron bombardment, Al—**26,** 221
Co, Cu, Fe, Ni—**26,** 739
hydrogen chloride; ionization—**26,** 339
multiplicity; suggestion—**26,** 150
nitrogen, negative bands—**26,** 780
spectral terms computed from—**26,** 232, 739
Proceedings of American Physical Society
Portland, Oregon, Meeting, June 19, 1925—**26,** 281

Quantum theory (see Absorption, Spectra, X-rays)
quantum dynamics; degenerate systems; weak quantization—**26,** 419

Radiation pressure
due to intermolecular forces; theory—**26,** 491
Reflection of light
theory; change in reflecting power in ultraviolet at photo-electric threshold—**26,** 285(A15)
Refraction of light
theory; application of dispersion formula to calculation of indexes from critical potentials—**26,** 232
Resonance radiation (see Fluorescence)

Scattering of light
in gases; mixtures of air and CO_2—**26,** 495
in vapors, saturated; ether, alcohol, etc.—**26,** 285 (A14)
Schottky effect or Shot effect (see Thermionic emission)
Sound (see Acoustics, Audition)
absorption, anomalous, in auditorium—**26,** 288 (A24)
resonators; theory—**26,** 688
transmission of a conduit; influence of branch line—**26,** 688
Specific heat
measurement; bar method—**26,** 287(A21)
Spectra
absorption
carbon dioxide, bands—**26,** 469
lead vapor, ultraviolet—**26,** 189
manganese vapor—**26,** 102
sodium; molecular broadening; values of probability coefficients—**26,** 176
theory; maximum absorption on basis of correspondence principle—**26,** 431
water; infrared; 0 to 95°C—**26,** 771
AlO bands—**26,** 561
ammonia bands—**26,** 537
bands
AlO; emitter—**26,** 561
ammonia, ultraviolet—**26,** 537
analysis, quantum
CO—**26,** 283(A8)
CuI—**26,** 1
N_2, ultraviolet—**26,** 283(A7)
SiN—**26,** 319
BeF; discussion—**26,** 561
BO; discussion—**26,** 561
CO; analysis—**26,** 283(A8)
CO_2, infrared; emission and absorption—**26,** 469
CN, discussion—**26,** 561
CuB, CuCl, CuF, CuI; excitation by active N_2—**26,** 1
CuI, 260 heads, analysis—**26,** 1

Spectra—bands (cont.)
electronic spectra; discussion—**26,** 1
emitters
aluminum—**26,** 561
ammonia, ultraviolet—**26,** 537
electronic spectra; theory—**26,** 1
nitrogen bands of Duffendack—**26,** 561
Schuster band—**26,** 537
flame, Bunsen, infrared—**26,** 283(A9)
grouping according to excess electrons of emitters—**26,** 561
one-excess-electron bands; BeF, BO, CO, CN, N_2, MgF, AlO, SiN—**26,** 561
isotope effect
CuI—**26,** 1
SiN—**26,** 319
MgF—discussion—**26,** 561
multiplicity; discussion—**26,** 561
nitrogen
analysis of ultraviolet—**26,** 283(A7)
critical potential—**26,** 780
emitter of Duffendack bands—**26,** 561
SiN; analysis; new bands—**26,** 319
theory; application (see analysis)
emission of electronic spectra—**26,** 1
water, infrared, 0-95°C—**26,** 771
BeF bands—**26,** 561
boron, B_{II}; classification; term values—**26,** 282 (A5), 310
BO bands—**26,** 561
cadmium; pp' multiplet—**26,** 165
fluorescence excited by sparks—**26,** 761
carbon, C_{III}; classification; term values—**26,** 282(A5), 310
CO bands—**26,** 283(A8)
CO_2 bands—**26,** 469
chlorine, series and multiplets—**26,** 282(A6)
CN bands—**26,** 561
CuB, CuCl, CuF, CuI bands—**26,** 1
fluorescence, excited by sparks
cadmium vapor—**26,** 761
indium and Tl mixed with Cd—**26,** 761
thallium mixed with Hg—**26,** 573
helium, metastable; life in states $2S$ and $2s$—**26,** 454
indium; fluorescence of vapor—**26,** 761
intensities, relative; Na series; theoretical calculation of transition probabilities—**26,** 749
iron; secondary standards—**26,** 284(A10)
lead; absorption of vapor—**26,** 189
arc spectrum—**26,** 189
MgF bands—**26,** 561
manganese; absorption of vapor—**26,** 102

Spectra (cont.)
mercury; series; spectrogram—**26,** 165
neon; secondary standards—**26,** 284(A10)
nitrogen (see bands)
pp' groups, for 2 and 3 valence electron atoms—**26,** 150
cadmium—**26,** 165
SiN bands—**26,** 319
sodium; absorption lines; broadening; transition probability coefficients—**26,** 176
standards, secondary; lines of Ne and Fe—**26,** 284 (A10)
thallium; fluorescence of vapor
with Cd—**26,** 761
with Hg—**26,** 573
theory (see bands)
absorption; transition probabilities for Na—**26,** 176, 749
calculation of coefficients on basis of correspondence principle—**26,** 431
fluorescence of mixed vapors; rôle of excited Hg atoms—**26,** 573
screening constants for regular doublets, Li to O—**26,** 310
selection principles; forbidden lines—**26,** 165
water, absorption bands, 0-95°C—**26,** 771

Thermal conductivity
measurement, bar method—**26,** 287(A21)
metals at high temperatures; Al, Cu, Ni, Zn—**26,** 287(A20)
selenium strip; effect of light—**26,** 475
Thermal expansion
typemetal—**26,** 841
Thermionic emission of electrons
Schottky effect, low frequency circuits—**26,** 71
theory, kinetic—**26,** 241
Thermionic emission of ions
from oxide coated filaments; oxygen negatives—**26,** 360
from Pt—**26,** 625
Thermo-electric effects.
aluminum; effect of pressure—**26,** 286(A17)
effect of compression—**26,** 286(A17)
effect of rolling—**26,** 286(A19)
effect of changing temperature gradient—**26,** 286 (A18)
theory, electron—**26,** 286(A17)
zinc, single crystal wire—**26,** 486
Thermo-magnetic transverse effects
Leduc and Nernst effects; measurement—**26,** 820
for Au, Co, Ni, Pd—**26,** 820

Thermometer, resistance
small; construction—**26,** 841

Vapor pressure
lead, 1118 to 1235°C—**26,** 851
measurement for metals—**26,** 851
mercury, 20 to −80°C—**26,** 859
170 to 203°C—**26,** 851
Vaporization
latent heat; lead—**26,** 851
mercury, 20 to −80°C—**26,** 859

X-rays (see X-ray spectra)
chemical effect—**26,** 525
photo-electric effect of soft rays; Al—**26,** 221
Co, Cu, Fe, Ni—**26,** 739
scattered; Compton effect
from Ag, Al, Cu, graphite, Pb, S; intensity ratio—**26,** 282(A3)
from Al and Li; intensity distribution—**26,** 300
from graphite; wave-length shift—**26,** 282(A4)
from paraffin; wave-length shift—**26,** 691
from molybdenum—**26,** 281(A2)
recoil electrons produced (see secondary rays)

X-rays (cont.)
secondary beta rays
direction of ejection—**26,** 289, 697
theory of number—**26,** 281(A1), 433

X-ray spectra
absorption edges
compounds—**26,** 525
K-edges; Ti, V, Cr, Mn—**26,** 525
Ag; sharpness—**26,** 724
phosphorus—**26,** 143
L-edges; Sn, Sb, Fe, I—**26,** 525
characteristic lines
K-series; Cu; relative intensities—**26,** 714
Mo; wave-lengths and intensities—**26,** 701
Mo; intensity distribution—**26,** 724
L-series; W, relative intensities—**26,** 714
terms connected with critical potentials—**26,** 232, 739
measurements; wave-length; corrections—**26,** 60
intensity distribution; instrumental factors—**26,** 724
theory; multiple K and L levels; screening constant—**26,** 143